Data Sheet (Cat.No.TMPY-02711)

TargetMol

Ferritin heavy chain 1/FTH1 Protein, Human, Recombinant

General Information

Synonyms: FHC;FTHL6;FTH;PIG15;PLIF;ferritin, heavy polypeptide 1;HFE5

Protein Construction: A DNA sequence encoding the human FTH1 (P02794) (Met 1-Ser183) was expressed and purified. Predicted N terminal: Met 1

Species: Human

Expression Host: E. coli

Accession: P02794

Molecular Weight: 21.2kDa (predicted); 21.2kDa (reducing conditions)

QC Testing

Biological Activity: Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 95 % as determined by SDS-PAGE

Endotoxin: Please contact us for more information.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

FTH1 (ferritin, heavy polypeptide 1) is the heavy subunit of ferritin which is the major intracellular iron storage protein in prokaryotes and eukaryotes. It is composed of 24 subunits of the heavy and light ferritin chains. Variation in ferritin subunit composition may affect the rates of iron uptake and release in different tissues. A major function of ferritin is the storage of iron in a soluble and nontoxic state. Defects in ferritin proteins are associated with several neurodegenerative diseases. FTH1 gene has multiple pseudogenes. Several alternatively

spliced transcript variants have been observed, but their biological validity has not been determined. FTH1 stores iron in a soluble, non-toxic, readily available form. It is important for iron homeostasis. It has ferroxidase activity. Iron is taken up in the ferrous form and deposited as ferric hydroxides after oxidation. It also plays a role in delivery of iron to cells. FTH1 mediates iron uptake in capsule cells of the developing kidney.

Reference

Hentze MW, et al. (1986) Cloning, characterization, expression, and chromosomal localization of a human ferritin heavy-chain gene. Proc Natl Acad Sci. 83(19):7226-30.

Rual, et al. (2005) Towards a proteome-scale map of the human protein-protein interaction network. Nature. 437 (7062):1173-8.

Stelzl, et al. (2005) A human protein-protein interaction network: a resource for annotating the proteome. Cell. 122 (6):957-968.

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